

ABSTRACT

“A comparison of the effects of preloading versus coloadng using crystalloids and colloids during elective LSCS under spinal anaesthesia”

INTRODUCTION:

Spinal anaesthesia is the preferred technique in caesarian section. Hypotension is the most common side effects seen with neuraxial blockade. Prevention of hypotension by preloading with crystalloids and colloids is being practised but recently co-loading of fluids has been attempted in the course of management of SAB induced hypotension.

AIMS/OBJECTIVES

1. To assess if the volume preloading or volume coloadng is more beneficial in preventing the adverse haemodynamic changes in caesarean section under spinal anaesthesia.
2. To find out whether the crystalloids or colloids are better in volume preloading / co-loading.
3. To assess the requirement of vasopressors.

SETTINGS AND DESIGN: Study conducted in MGMGH, Trichy on 160 ASA II term parturients posted for elective caesarean section. Patients were randomly allocated to four Groups : **PR, CR ,PH,CH** .

MATERIALS AND METHODS

Group **PR** was Preloaded with 20ml/kg of RL over 30 min before spinal anaesthesia, Group **CR** was Co-loaded with 20ml/kg of RL within 20 min on initiation of spinal anaesthesia, Group **PH** was Preloaded with 20ml/kg of 6% HES over 30 min before spinal anaesthesia, Group **CH** received Coload of 20ml/kg of 6% HES within 20 min on initiation of spinal anaesthesia. Patient's baseline Heart rate, systolic, diastolic and mean arterial pressure were recorded and spinal anaesthesia was performed. Intraoperatively, Heart rate, systolic, diastolic and mean arterial pressure were recorded every 2min for the first 20 min and every 5 min till 30 min and every 10 min till the end of one hour, from the start of spinal anaesthesia.. Episodes of hypotension were recorded and treated with bolus of 6mg of ephedrine and total amount of ephedrine was noted. Adverse effects, if any were recorded.

STATISTICAL ANALYSIS:

The results obtained were analysed with SPSS (Statistical Package for Social Sciences) version 13.0 using One way ANNOVA Test.

RESULTS

Baseline parameters were similar in all the four Groups. Heart rate decreased from the baseline in all the four Groups, however, the mean heart rate was highest in Group PR. MAP decreased in all four Groups from baseline, however, highest fall was recorded in Group PR. Incidence of hypotension was 77.5% in Group PR & 72.5% in Group CR as compared to 47.5% in Group CH and 60% in Group PH respectively. Group PR patients received 10.62 ± 7.86 mg of ephedrine, Group CR

received 6.6 ± 5.58 mg as compared to Group PH 4.5 ± 4.44 mg & Group CH received 1.92 ± 3.12 mg of ephedrine. Thus, the incidence of hypotension and ephedrine consumption was significantly higher in Group PR and Group CR as compared to Groups PH and CH, this difference was statistically significant.

CONCLUSION:

Colloid co-loading is better than the volume preloading in preventing the adverse haemodynamic changes in caesarean section under spinal anaesthesia. 6% HES (colloid) is better in volume preloading / co-loading with minimal maternal haemodynamic changes compared to the Ringer Lactate (crystalloid) & Co-loading with 6% HES was found to be better in preserving a more stable maternal haemodynamic status than preloading with 6% HES. There was increased requirement of vasopressors when Ringer Lactate (crystalloid) was used and it was more with preloading with RL compared to co-loading.

KEYWORDS:

Colloid 6% HES, Co-loading, Crystalloid RL, Preloading, Ephedrine